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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,854	08/08/2004	David W. Burns	DWB002	4853

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EXAMINER
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LIANG, REGINA

ART UNIT	PAPER NUMBER
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2629

DATE MAILED: 07/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/710,854	<b>Applicant(s)</b> BURNS, DAVID W.	
	<b>Examiner</b> Regina Liang	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/7/06 has been entered. Claims 1-39 are currently pending in the application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### *Claim Rejections - 35 USC § 102*

3. Claims 1, 2, 4, 6, 16, 18, 20, 21, 29, 30, 31, 38, 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Omura et al (US. PAT. NO. 6,594,023 hereinafter Omura).

As to claims 1, 31, Omura discloses a system (Fig. 8 for example) for determining a stylus position of a stylus (65), comprising: a single telemetric imager (62); and a controller (control part 68) electrically coupled to the telemetric imager (see Fig. 8); wherein the controller determines the stylus position based on a generated image of a stylus tip from a first direction (from CCD camera 63a) and a generated image of the stylus tip from a second direction (from CCD camera 63b) when the stylus tip is in a stylus entry region (col. 14, line 45 to col. 16, line 23 for example).

As to claim 2, Omura teaches the stylus comprises a pen (65 in Fig. 8).

As to claim 4, Omura teaches the pen 65 has an infrared rays LED 64 at a tip end, when the camera imaging system detects the writing end touching on the inputting/detecting area 66, which reads on a writing-mode imaging target as claimed).

As to claim 6, Omura teaches the telemetric imager(62) comprises two CCD cameras (this corresponds to two optical imaging arrays).

As to claim 16, Fig. 8 teaches a communication port (interface circuit 79) connected to the controller to enable communication between the controller and a digital computing device (computer, col. 16, lines 19-21).

As to claim 18, Omura teaches the telemetric imager (62) and the controller (68) are contained in a housing (col. 15, lines 46-48).

Claim 20 is a method claim corresponding to the above apparatus claim 1, is rejected for the same reasons as stated above since such method "steps" are clearly read on by the corresponding "means".

As to claim 21, Omura teaches the telemetric imager comprises two CCD cameras (two optical imaging arrays)

As to claims 29, 38, Omura teaches sending the determined stylus position to a digital computing device (computer, see col. 16, lines 19-21).

As to claims 30, 39, Omura teaches interpreting the determined stylus position (col. 16, lines 1-65).

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4. Claims 3, 8-10, 28, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omura in view of Tsuji (US 2001/0020936).

Omura does not disclose a writable medium in the stylus entry region comprising a sheet of paper. However, Figs. 1 and 2 of Tsuji teaches a stylus entry region comprising a sheet of paper (20) as a writable medium. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the writable medium of Omura to have a sheet of paper as taught by Tsuji since this allows the user to draw or write on the writable medium for inputting handwritten characters or diagrams to a computer or a printer such that both an electronic copy and a hardcopy is available as a record to the user at the same time.

5. Claims 5, 25, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omura in view of Brown et al (US. PAT. NO. 4,430,526 hereinafter Brown).

Omura does not disclose the stylus includes an erasing mode image target near an erasing end of the stylus. However, Figs. 2 and 3 of Brown teaches a stylus (30) has a writing mode near writing end of a stylus (32), an erasing mode near an erasing end of the stylus (31). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the stylus of Omura to have an erasing mode as taught by Brown so as to provide pointing device which is capable of performing writing and erasing operation.

6. Claims 7 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omura in view of Inabata ((US. PAT. NO. 4,553,845,245,1752).

Omura does not disclose using one optical imaging array to generate the image of the stylus tip from the first and second directions. However, Fig. 1 of Inabata teaches using one optical imaging device (CCD 7) to generate images of from the first and second directions (col. 1, lines 37-49). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Omura to use one optical imaging CCD as taught by Inabata so as to provide a low cost optical imaging device.

7. Claims 11-13, 15, 23, 26, 27, 32, 35, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omura in view of Ogawa (US 6,100,538).

As to claim 11, Omura does not disclose a light source positioned near the telemetric imager. However, Fig. 22 of Ogawa teaches a light source (31) positioned near the telemetric imager (3), wherein light emitted from the light source illuminates the stylus tip when the stylus tip is in the stylus entry region. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Omura to a light source positioned near the telemetric imager as taught by Ogawa since this enhances the illumination efficiency and prevents the undesired reflective light of the stylus caused by extraneous light from entering into the detecting units (col. 16, lines 24-27 of Ogawa).

As to claims 12, 13, Ogawa teaches the light source comprising LED (col. 10, lines 12-13).

As to claim 15, Fig. 23 of Ogawa teaches an optical filter (39) positioned between the telemetric imager and the stylus, and the optical filter preferentially passes light from the stylus tip to the telemetric image.

As to claims 23, 32, Fig. 22 of Ogawa teaches illuminating the stylus tip with a light source (31) when the stylus tip is in the stylus entry region.

As to claims 26, 27, 35, 36, Ogawa teaches determining angular information of the stylus (angle or rotation of the stylus) when the stylus tip is in the entry region (col. 7, lines 27-32).

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Omura in view of McDermott et al (US. PAT. NO. 5,635,683 hereinafter McDermott).

Omura teaches a communication port connected between the controller and a digital computing device (5). Omura does not explicitly disclose the communication port is one of a wired port or a wireless port. However, McDermott teaches a controller (processor 18 in Fig. 1) connected to a digital computing device (host computer 16) via a wire or wireless link (e.g. col. 9, lines 48-51). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Omura to use a wire or wireless communication link for connecting the controller and the computing device so as to readily transmit information from the controller to the computing device.

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Omura in view of Yoshida et al (US. PAT. NO. 5,401,917 hereinafter Yoshida).

Omura does not disclose a stylus holder formed within the housing and receives the stylus for stylus storage. However, Fig. 1 of Yoshida teaches a housing of pen input device having a stylus holder (3) formed within the housing and receives the stylus (5) for stylus storage. Thus, it would have been obvious to one having ordinary skill in the art at the time the

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invention was made to modify the system of Omura to have a stylus holder as taught by Yoshida so as to allow stylus to be easily inserted and extracted thereto the therefrom and the stylus being held in a stable manner when inserted inside (col. 1, lines 13-15 of Yoshida).

10. Claims 14, 24, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omura view of Ogawa and Badyal et al (US. PAT. NO. 6,151,015 hereinafter Badyal).

Noted the discussion of claim 11 above. Omura as modified by Ogawa teaches a light source positioned near the telemetric imager. Furthermore, Ogawa teaches a first set of images of the stylus tip from the first direction and the second direction are generated with the light source on, and wherein a second set of images of the stylus tip from the first direction and the second direction are generated with the light source off. Ogawa also teaches using the first set of images and the second set of image to determine the stylus position (col. 11, lines 11-35).

Omura as modified by Ogawa does not disclose comparing the first set of images and the second set of images to determine the stylus position. However, Badyal teaches a computer pointing device comprising optical sensor for capturing images, the newly captured image is compared with previously captured image to determine the stylus position (col. 4, lines 14-20). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Omura as modified by Ogawa to have a comparator as taught by Badyal to ascertain the direction and amount of movement.



***Response to Arguments***

11. Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

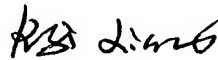
12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sekiguchi et al (US 2004/0032399), Ung et al (US 2005/0078095), Schiller et al (US 6,577,299).

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Regina Liang  
Primary Examiner  
Art Unit 2674

7/17/06